Unit 05 – Data Modelling

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Learning Aim A1 – Stages In The Decision Making Process

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A1.2 Information Quality and Decisions

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Learning Objectives

To be able to identify factors that affect quality of information.

To understand what is meant by data analysis and recognise how to identify alternatives.

To be able to understand how to make decisions and communicate those decisions to others.

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The Stages of the Decision Making Process

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Why Do Businesses Make Decisions?

All businesses will need to make decisions on a daily basis. Decisions could be:

Strategic – long term decisions that determines what the business will do over time e.g., increase sales.

Tactical – short term decisions that help the business achieve their aims e.g., hire more sales staff.

Operational – daily business decisions e.g., post job adverts for sales staff by the end of the week.

Data Modelling is used mainly for Strategic and Tactical decisions.

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The Decision Making Process 1

- Arriving at a business decision is the result of a set of stages.
- This is called the ***Decision-Making Process***. The stages are:
- 1 - Identifying the Scenario.
- 2 - Identifying Information and Sources.
- 3 - Recognising Factors that Affect the Quality of Information.

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The Decision Making Process 2

- 4 - Analysing Information.
- 5 - Identifying Alternatives and the Consequence of Implementing Them.
- 6 - Making and Justifying Decisions.
- 7 - Communicating Decisions to Others.
- In this lesson we will look at steps 3 to 7

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Stage 3 – Factors That Affect the Quality of Information

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Factors That Affect Quality of Information

All information can be rated as being of Good or Bad Quality.

Good Quality information will allow a business to make ***good decisions***.

The following factors affect the Quality of information.

Currency, Accuracy and External Factors.

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Currency of Information

This is when your information source was created or updated.

It a measure of how ***up to date*** your data is.

If your data was created or updated recently, it is very current.

If your information is out of date, your model will be of poor quality.

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Accuracy of Data

This is a measure of how many errors are in your data.

It is also a measure of how detailed your data is.

It is entirely possible to have error free data that is not very detailed.

For example, if someone correctly records your English and Maths GCSE data and misses the other GCSE's..

This data does not accurately describe you!

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External Factors - 1

These are things that are completely beyond your control.

Most of your data will be generated internally to a business.

External factors will be data outside the business.

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External Factors - 2

- For example, in 2022, Netflix saw a loss of 200,000 subscribers between January and April.
- This saw Netflix lose $50 Billion off its stock value.
- This was attributed to the external factors of:
- The rise of other competitor streaming services like Disney+ and Amazon.
- The rise of the cost of living putting pressure on household finances.
- Netflix moving to prevent password sharing.

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Stage 4 – Analysing Information

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What is Information Analysis?

This takes several parts:

Understanding what information has been collected.

Understanding how the information has been modified or processed.

Understanding the questions we are trying to answer based on the information provided.

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Data Analysis Example

Rank	Film	Weekend Gross
1	Spider-Man: No Way Home	£ 4,619,518
2	The Matrix: Resurrections	£ 2,686,785
3	Clifford The Big Red Dog	£ 349,836

Here is some data that you will have seen already.

The BFI charts for the weekend box office during Christmas 2022.

We might want to ask:

- What was the number 1 film?
- How much money did it make?
- How much more money did it make than the number 2 film?

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Stage 5 – Identifying Alternatives

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Identifying Alternatives.

By considering all possible alternatives you are making sure that your model is a good one.

Sticking with the first ideas you produce may mean that better alternatives exist and that your model is flawed. Alternatives include:

Sources of data.

Ways of presenting data.

Calculations on the data that you need.

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Alternative Sources of Data

We have been looking at UK Cinema box office data for the Christmas holiday period 2021.

The source of this was: https://www.bfi.org.uk/industry-data-insights/weekend-box-office-figures

There are alternative sources we could have used.

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Alternative Sources of Data

https://www.cinemauk.org.uk/the-industry/facts-and-figures/latest-uk-cinema-statistics/monthly-top-10-box-office/

https://www.boxofficemojo.com/weekend/by-year/?area=GB

https://www.the-numbers.com/box-office-chart/weekend/2021/12/24/United-Kingdom/UKP

Here are three websites that also give weekly UK box office data.

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Class Tasks A1.2 – Alternative Sources of Data

Look at the three links given to you in task 1.2.1.

For each one, identify if this data is a suitable alternate source of information about UK box office data at Christmas 2022.

Discuss your findings with the group.

<u>Time allowed: 10 minutes</u>

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Class Task – Suggested Answers

https://www.cinemauk.org.uk/the-industry/facts-and-figures/latest-uk-cinema-statistics/monthly-top-10-box-office/	**NOT SUITABLE** This only gives current data and will not show data from the past, and so will not show data from Christmas 2022.
https://www.boxofficemojo.com/weekend/by-year/?area=GB	**NOT SUITABLE** This only shows the Number 1 film, it is not sortable by week and only gives the information in US Dollars.
https://www.the-numbers.com/box-office-chart/weekend/2021/12/24/United-Kingdom/UKP	**SUITABLE** - This site gets its data from the BFI. This shows that the BFI data is trustworthy, reliable and accurate.

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Self-Check: Lesson Review

Can I identify and explain the three factors that affect the quality of information?

Can I explain what is meant by data analysis?

Do I understand the different data alternatives?

Do I understand how to make and justify decisions?

Can I identify the three groups of people that I need to communicate decisions to?

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Further Reading

Websites

https://www.lucidchart.com/blog/decision-making-process-steps

https://online.csp.edu/resources/article/decision-making-process/

https://www.structureddecisionmaking.org/steps/

Videos

https://www.youtube.com/watch?v=5a0Fe3AchAI

https://www.youtube.com/watch?v=3aC3sUlEsr8

Textbook: pp281 - 283

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